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Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORM	ANCE / UP	DATE			
											QA Closed:	Da	te:
Work Ord	er:					DISPOSITION				AGAINST DE	EPARTMENT,	/PROCESS	
Part I	۔ . No					Rework Scrap Use-as-is Work Order Update		ا Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-	Water Jet d. Eng. Coor. re/Packaging Supplier	Quality Other
Root						otion of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verificatio	n QC Inspector
Doc/Data						•							
Equip/Tooling	Ш				: 							1	
Operator	Ш												
Material	Ш												
Setup													
Other												ļ	
Process													
Supplier													
Training	Ц											ļ	
Unapproved													
		· · · · · · · · · · · · · · · · · · ·					AUL	T CATE	SORY				
Landi					<u> </u>	General		1			7		
	-	Bending				Bend	-	Grain			Ovalized		Pressure/Forced
	-	Centre No	ot Concer	ntric to (o/s _	BOM/Route	_	Hardwa	_		Over/Under		Temperature/Cure
	⊢⊣	Cracks			<u> </u>	Broken/Damaged	_	4	on incomplete	<u> </u>	Part Incorre		Weld
	-	Crushed/0	Crimped.			Burrs	<u></u>	-	ior:s Incomplete/U	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
	├ ──┤	Cuffs				Contamination	<u> </u>	Mainte		_	Part Moved		
		Heat Trea			-	Countersink	<u>_</u>	Mislabe		<u> </u>	Positioned \	-	 1
		Inspection		Tube		Cut Too Short	L	Misread			Power Loss/	'Surge	Other
	\vdash	Ripples in				Drill Holes		Offset					
		Torque W	aves in E	xtrusion	n	Drawing	1	Out of C	Calibration			•	

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

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Quality Control

												DQA:	Date	·
NCR: Y	/es	/ No				WORK ORDER NON-C	100	NFORN	MANCE ,	/ UPDATE		QA Closed:	Date	
	-		 			DISPOSITION				ACAIN	CT DC			
Work Orde	er:					DISPOSITION				AGAIN	או טב	PARTMENT,	PROCESS	
Part N	-					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining oforming Large Fab	Small Finishi	ab	l	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	T				Descri	otion of work order update		nitial		Action		Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng		Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved									•					
							AUL	T CATE	<u>SORY</u>					
Landir		Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection	Crimped t n Strip in		O/S	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread	on Incomp ons Incom nance led	lete plete/Unclear		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Ripples in	Bend			Drill Holes	1	Offset						

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

December-19-1				^945 ¹	/ 8 ^				Page 3	
Item ID: Revision ID: Item Name:	D3199-1 Bracket		Salati Promission (Salati Salati S	Accept	*N900040	100*	Setup	Start Stop	*NS1* *NS2*	
Start Date: Required Date Reference:	12/19/12 :: 1/11/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item ID: Customer:					
Approvals:		an:		Tooling: SPC (Y/N):	Date:		Run	Start Stop	*NR1* *NR2*	
Sequence ID/ Work Center I 150 *150* Powdercoat Powder Coating	ID	Operation Description Grey Sandtex(Ref:43.5.6) Memo START TIM OVEN TEM FINISH TIM	ie:///b. perajure:_ <i>330</i> °	Set Up/ Run Hours 0.00	Tool ID Tool #	Code Qty	Qty	y N	Reject Insp. Number Stamp	
*160 *160* QC Quality Control		QC3- Inspect Part Finish Memo		0.00 35	9	48 Cou	7		and the second state of th	
170 *170* Packaging Packaging		Identify as per dwg & Sto	ock Location 123	0.00		-4	&x _		13-2-	

						•					DQA:	Date	e:
NCR:	Yes	/ No				WORK ORDER NON-C	O	VFOR	MANCE / UP	DATE	O A Classed	Dot	
			<u> </u>					1			QA Closed:	Date	e:
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I	- . No.					Rework Scrap Use-as-is Work Order Update		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root			<u> </u>		Descri	ption of work order update	П	Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	1	nief Eng		ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved						F	AU	ू बु CÄTE	GORY				
Landi	ng G	iear				General		*			,		
		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in Torque W	Crimped. at n Strip in n Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes		Instruct Mainte Mislabe Misread Offset	ion Incomplete ions Incomplete/ enance eled	'Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N Power Loss/	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
i	l I	rorque w	vaves in E	xcrusio	H	Drawing	1	Jour or (Lanoration				

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord				*945	528*	- · · · . -						Page 4
Item ID: Revision ID: Item Name:	D3199-1 Bracket			Accept	*N900	040	100)*	Setup	Start Stop	171	S1* S2*
Start Date: Required Date: Reference:	12/19/12 1/11/13	Start Qty: 40.00 Req'd Qty: 40.00	*40* *40*		Cust Item I Customer:	D:					. 1 4	. 12
Approvals:	Process QC:	Plan:	Date:	Tooling: SPC (Y/N):		ate:		1	Run	Start Stop	, "IV	R1* R2*
Sequence ID/ Work Center II 180 *180* QC Quality Control	D	Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty	ject v	Reject Number	Insp. Stamp

10,08 20

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFOR	MANCE / UP	DATE			
								, ,			QA Closed:	Date:	
Work Ord	er.					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part I	No			· · · · · · · · · · · · · · · · · · ·		Rework Scrap Use-as-is Work Order Update			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root	Ī				Descri	ption of work order update		Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUI	LT CATE	GORY				
Landi	\Box	Bending Centre N	ot Conce	ntric to	o/s	General Bend BOM/Route		Grain Hardwa	are		Ovalized Over/Under	tolerance	Pressure/Forced Temperature/Cure
		Cracks				Broken/Damaged		Inchect	ion Incomplete		Part Incorre	ct	law hlaw

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabelec

Misread

Offset

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Wrong Stock Pulled

Other

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Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Page 1

Work Order ID:

94528

Parent Item:

D3199-1

Parent Item Name:

Bracket

Start Date: 12/19/12

Required Date: 1/11/13

Start Qty: 40.00

Required Qty: 40.00

Comments:

IPP Rev:C IPP Rev:D Removed Scribing As per Rev B 05-11-05 JLM 06-11-24 JLM

IPP Rev:E 11.03.31 as per ecn 11-

531 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA 304/316 .040 Sheet		Purchased	No			100	sf	456.3001	0.099	4.16842	4.7 1B13:	-1-12	
				Location		Loc Oty	Lo	c Code					

Loc Oty	Loc Code		
456.300065			Â
0.000065			\mathbf{w}
33			
103.3		199753	
320			
	456.300065 0.000065 33 103.3	456.300065 0.000065 33 103.3	456.300065 0.000065 33 103.3

										DQA:	Date:	
NCR: Yes	/ No	·			WORK ORDER NON-C	ON	IFORN	/ANCE / UP		OA Classel	Data	
				 						QA Closed:	Date:	···
Work Order:					DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
WORK Order.			· · · · · ·		Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part No.					Scrap		ľ	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
:					Use-as-is			noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR No.					Work Order Update	•		Large Fab	Composite		Supplier	
Root				Descri	ption of work order update	l li	nitial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chi	ief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other			1									

			FAU	LT CATEGORY			
Landing	Gear	General		_	_		
	Bending	Bend		Grain	Ovalized	Pressure/Fo	orced
	Centre Not Concentric to O/S	BOM/Route		Hardware	Over/Under tolerance	Temperatu	re/Cure
	Cracks	Broken/Damaged		Inspection Incomplete	Part incorrect	Weld	
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stoo	k Pulled
	Cuffs	Contamination		Maintenance	Part Moved		
	Heat Treat	Countersink		Mislabelecl	Positioned Wrong		
	Inspection Strip in Tube	Cut Too Short		Misread	Power Loss/Surge	Other	
	Ripples in Bend	Drill Holes		Offset	 		
	Torque Waves in Extrusion	Drawing		Out of Calibration			
	Turning Sequence	Finish		Out of Sequence			
Ī	Wave/Twist in Tube	Folio		Outside Dimensions			

Process
Supplier
Training
Unapproved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

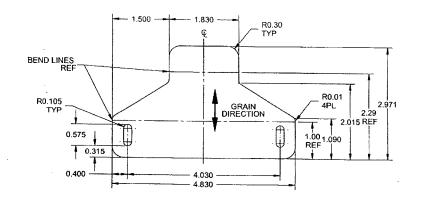
DART AEROSPACE LTD	Work Order:	94528
Description: Bracket	Part Number:	D3199-1
Inspection Dwg: D3199 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

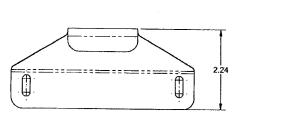
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.210	+0.005/-0.001	POG.	L		V BUZ	
0.575	+/-0.010	_, 575	2		V	
1.090	+/-0.010	1.696	<u>د</u>		V	
2.015	+/-0.010	2.015	^		V	
2.971	+/-0.010	2,976	2		V	
1.830	+/-0.010	1.834	L		V	
4.830	+/-0.010	4.833	2		V	
4.030	+/-0.010	4.028	٦		V	W-1-1
	·					
			(AS			

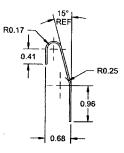
Measured by: B	Audited by:	15	Preliminary Approval:		
Date: 3-1-17	Date:	13114	Date:		

Rev	Date	Change	Revised by	Approved/
Α	06.10.20	New Issue	KJ/JLM .	
В	06.11.24	Dwg Revision revised	KJ/JLM	////
C.	11.03.08	Dwg Rev updated	KJ (A	<u> </u>
D.**	12.02.06	Dwg Rev updated	KJ ak	



D3199-1F FLAT PATTERN





D

С

В

SHOP COPY RETURNIO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORL ORDER MCS NO _94528_MCS

D3199-1 BRACKET MADE FROM D3199-1F

NOTES:
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S206A
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-X" AND B/N "BXXXXXX" PER QSI 044 6.1
7) WEIGHT: D3199-1 = 0.11 lbs, D3199-3/-4 = 0.26 lbs EACH

E	RE-DESIGNED D3199-3/-4/-3F PER CUSTOMER FEEDBACK TO OPTIMIZE FIT.				11.07.11	
D	RE-DESIGNED D3199-3/-4/-3F PER CUSTOMER FEEDBACK TO ELIMINATE BINDING OF DOOR ONCE BRACKETS ARE INSTALLED. REF.: PAR11-79				11.03.21	
С	ADD -3/-4 PART (SHEET 2-4)				09.11.19	
В	2.24 WAS 2.142; ADD FINISH; UPDATE DWG			СВ	08.11.01	i
Α	NEW ISSUE			CP	03.08.05	1
REV.	DESCRIPTION			BY	DATE	i
DESIGN GP DART AEROSP			CFL	TD		
DRAWN		_h	HAWKESBURY, ONTARIO, CANADA			^
CHECKED		in	DRAWING NO.		REV. E	1
MFG. A	PPR.	R	7D3199		SHEET 1 OF 4	
APPROVED		w	TITLE		SCALE	
DE APPR.		#	BRACKET		NTS	l

DATE 11.07.11 COPYRIGHT © 2003 BY DART AEROSPACE LTD

